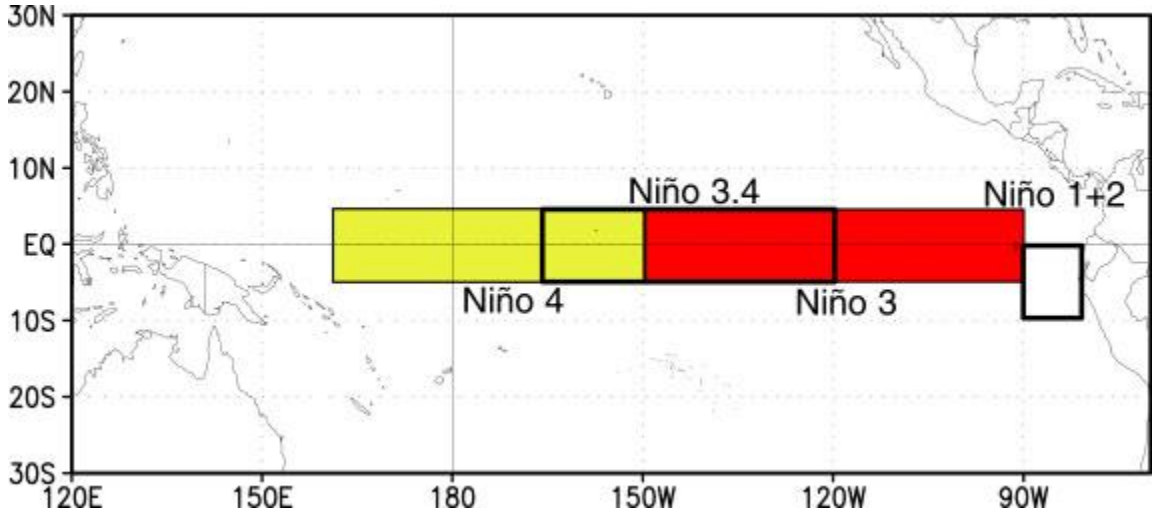
El Nino/La Nina Update

By Don Simonsen, General Forecaster

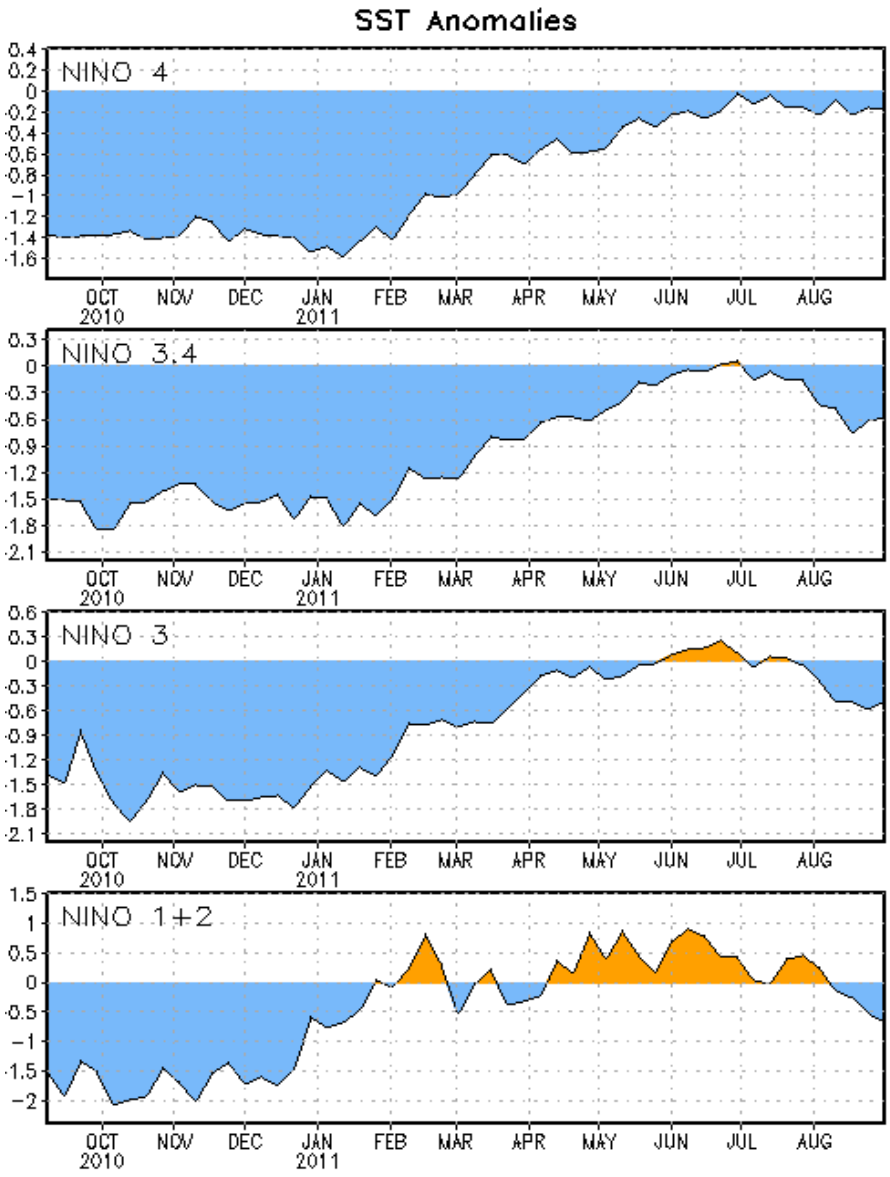
A strong La Nina peaked during the 2010-2011 winter. A colder and much wetter than normal winter and spring resulted, occurring across the northern tier of states, which is typical of La Nina. The unusually active storm track though, brought record amounts of snow and rain to the area, which led to record flooding. At least part of this extreme winter was related to other important large-scale upper air oscillations, which include the Pacific Decadal Oscillation, Arctic Oscillation, and North Atlantic Oscillation.

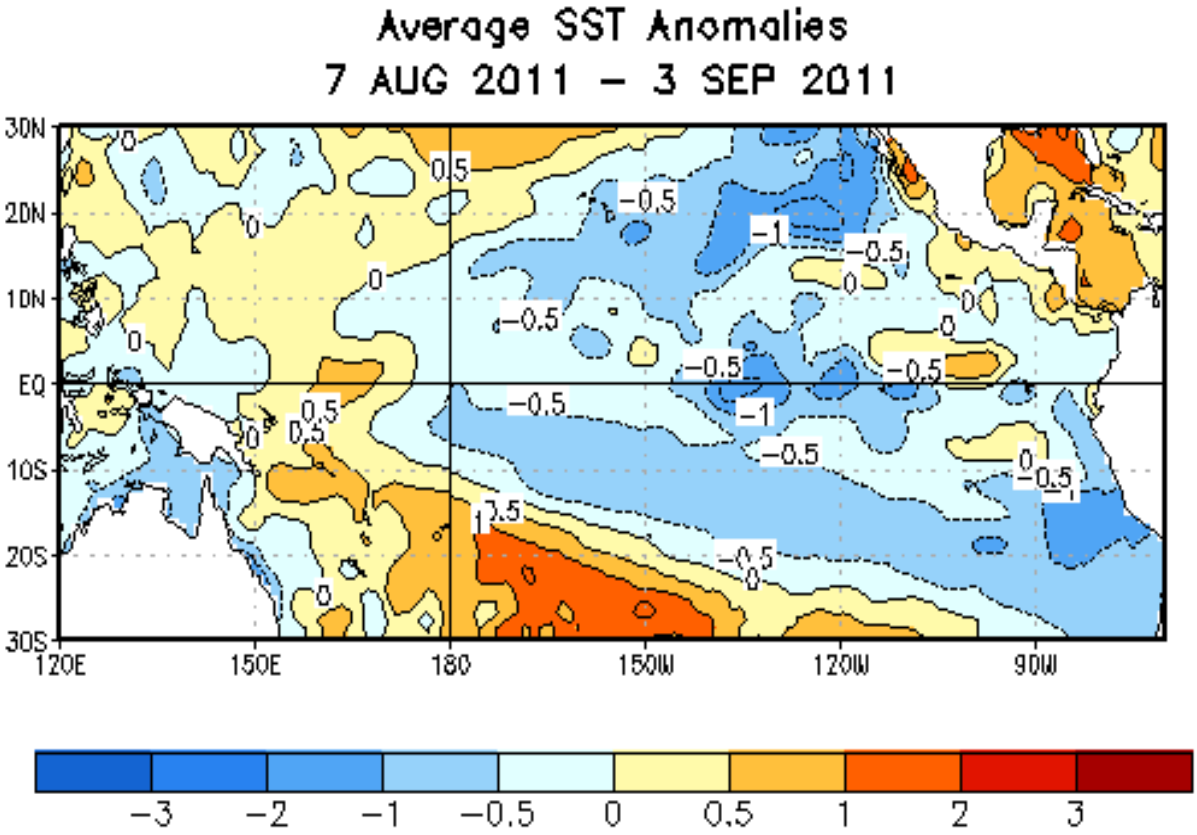
The La Nina ended this spring though, followed by a return to more normal-type weather conditions for the summer. Sea-surface temperatures are averaging near-normal in the regions of the Pacific Ocean that are typically looked at closely for El Nina/La Nina conditions.

There are increasing signs of a weak La Nina re-developing though. This is typical of the winter that follows a strong La Nina. Statistically, in looking at past years, one would expect a winter that is not as severe as last winter, but probably colder and snowier than normal.

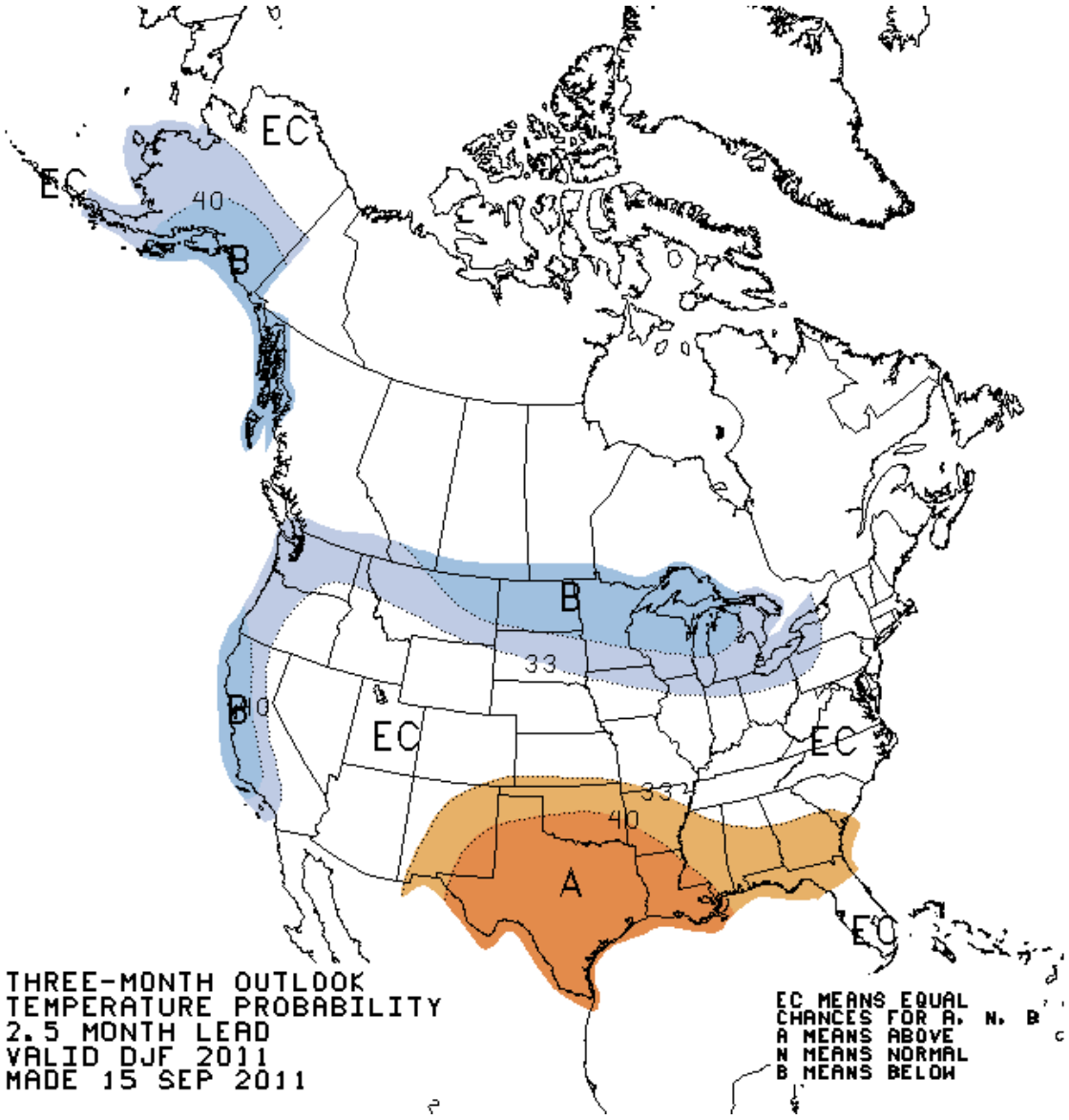


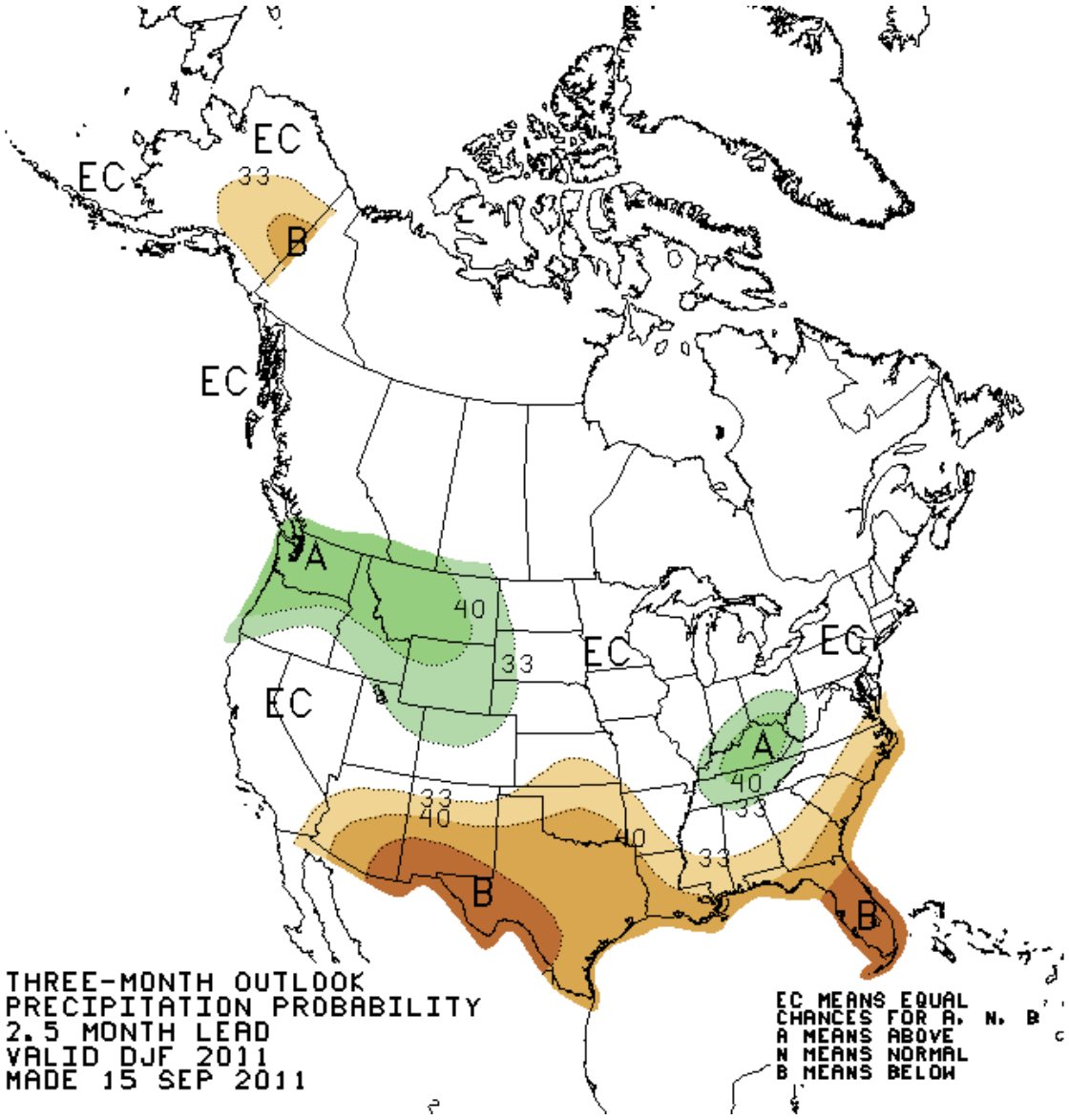
(Reference graphic showing the different El Niño regions used in the graphs below)


SST Anomalies
NINO 4
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
-1.4
-1.6
OCT 2010
NOV
DEC
JAN 2011
FEB
MAR
APR
MAY
JUN
JUL
AUG
NINO 3.4
0.3
0
-0.3
-0.6
-0.9
-1.2
-1.5
-1.8
-2.1
NINO 3
0.6
0.3
0
-0.3
-0.6
-0.9
-1.2
-1.5
-1.8
-2.1
NINO 1+2
1.5
1
0.5
0
-0.5
-1
-1.5
-2



The Climate Prediction Center long-range forecasts have changed quite a bit, and are now indicating fairly high confidence in a colder than normal winter and spring, and a snowier than normal winter.


EC
EC
40
B
B
33
B
10
EC
EC
33
40
A
EC
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
2.5 MONTH LEAD
VALID DJF 2011
MADE 15 SEP 2011
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


EC
EC
33
B
EC
A
40
33
EC
EC
A
40
33
40
40
33
B
B
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
2.5 MONTH LEAD
VALID DJF 2011
MADE 15 SEP 2011
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW